AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-43. (Cancelled).

44. (New) A stack injection mold apparatus adapted for improved removal of components, comprising: a stationary core assembly and an opposing facing moving core assembly each core assembly including a master core plate, and a core plate releasably secured to the master core plate, said core plate having a face, a first core insert secured to said core plate face, an intermediate cavity assembly comprising central manifold plates having opposing sides, one side facing the stationary core assembly the other side facing the moving core assembly, one cavity plate releasably secured to each said opposing side of the manifold plates, each cavity plate having a cavity insert secured thereto, one cavity plate and insert facing the core plate and insert of stationary core assembly to form one cavity core insert pair, and the other cavity plate and insert facing the core plate and core insert of the moving core assembly to form another cavity core insert pair, said cavity assembly and moving core assembly movable by moving mold press means in such a manner that the cavity and core insert of each pair are separated by equal amounts on either side of the cavity assembly, and in a closed position, the cavity and core inserts of each pair are mated together simultaneously defining a cavity between the inserts of each pair, into which molten plastic is injected from a molten plastic source, said cavities forming the shape of a desired article, and in said closed position, the core plate and cavity plate of each pair being secured together to form respective mold modules each comprised of a core

plate, core inserts, cavity insert and cavity plate; once said cavity plates are released from securement to the manifold plates and all connections therebetween disengaged, the moving core assembly and cavity assembly are adapted to be moved from the closed position to an open position where said cavity plates become separated from said manifold plates; and once said core plates are released from securement to said respective master core plates and all water, air, hydraulic, and electric connections therebetween are disengaged, said mold modules are simultaneously hoisted outwardly in a direction perpendicular to the direction of motion between said open and closed position by a hoist attachment member securable simultaneously to the periphery of each said module when the machine is in said closed position, each said module being slidably engaged to said hoist attachment in the direction of opening and closing the mold machine, the hoist attachment including a stop at opposite ends thereof, each of which limits the sliding movement of each module beyond the point where said cavity plates and components thereof are separated from said manifold plate, such that when said modules are attached to the hoist attachment in said closed position, each said module is moveable to the open position from said closed position to allow said separation of the cavity plates of each module from the manifold plates, and once said cavity plates are so separated, and said core plates are released from securement to said master core plates, said mold modules are adapted to be hoisted out of said mold machine.

45. (New) The apparatus of claim 44, wherein said modules are guided in said perpendicular direction by roller guides secured to the master core plates, rollingly engaging said core plates, and forming a guide path perpendicular to the motion of the mold machine for facilitating the simultaneous removal of each said mold module from said mold machine.

46. (New) The apparatus of claim 45, further including clamps positioned along the guide paths, which clamp the core plates to master core plates at the position of the guide path.

47. (New) The apparatus as recited in claim 45, wherein said roller guides guide the core plates relative to said master core plates along a contoured slot defined in each core plate, said slot being shaped to allow the core plate to move vertically and parallel to the master core plate for an initial distance thereby causing disengagement of quick disconnect couplings between plates, then spaced away from the master core plate for a further distance so as to accommodate each mold module being rapidly hoisted out of the mold machine.

48. (New) The apparatus as recited in claim 44, wherein the position of said cavity plates and cavity inserts and said core plates and core inserts are interchanged, namely that said cavity plates and cavity inserts are positioned on said stationary and moving master core plates and said core plates and core inserts are positioned on the opposing sides of said manifold plates.

49. (New) The apparatus as recited in claim 48, wherein the water, air, hydraulic and electric connections between the manifold plate and the respective core plate are positioned parallel and in line of opening, thus allowing the simultaneous disengaging as the manifold plate and core plates separate during opening and simultaneous reengaging of said connections as said manifold plate and respective core plate return to the closed position.

50. (New) The apparatus as recited in claim 44, wherein said hoist attachment includes a main bar having an upper side and a lower side, and a pair of blocks secured to the lower side of said bar at opposite ends thereof, each block having an opening extending parallel to the length of the bar, said main bar having at least one hoist member secured to the upper side of the main bar, said hoist member adapted for lifting said bar, a guide pin extending through the opening in

each said block, said guide pins having mounting blocks attached at the end of each guide pin, which limit the sliding movement of the guide pins within each opening, one said mounting block being adapted to mount a core plate and the other mounting block being adapted to mount a cavity plate of each said mold module, such that when said mounting blocks are mounted to said plates, said plates are slidable relative to the main bar, and said hoist bar is lifted when said apparatus is in said open position and mold modules attached thereto.

51. (New) The apparatus as recited in claim 44, further comprising an ejector plate operable to assist in ejection of the molded article from said core insert.

52. (New) The apparatus as recited in claim 44, said core plate being secured to the cavity plate to form said mold module by safety straps secured between the periphery of each of said core plate and cavity plate and said cavity plates are releasably secured to said manifold plates by removable straps and said core plates are releasably secured to said master core plates by clamp bar means.

53. (New) The apparatus as recited in claim 44 wherein said water, air, hydraulic and electric connections between the master core and the respective core plate are simultaneously disengageable and reengageable by quick disconnect couplings during module removal and reattachment respectively.

54. (New) The apparatus as recited in claim 44 wherein the water, air, hydraulic and electric connections between the manifold plate and the respective cavity plate are positioned parallel and in line of opening, thus allowing the simultaneous disengaging as the manifold plate and cavity plate separate during opening and simultaneous reengaging of said connections as said manifold plate and respective cavity plate return to the closed position.

55. (New) The apparatus as recited in claim 54 wherein said water air hydraulic conduits are positioned within the upper periphery of said master core pates and manifold plates for connection to the service sources.

56. (New) A stack injection mold apparatus adapted for removal of components, comprising: a stationary core assembly and an opposing facing moving core assembly, each core assembly including a master core plate, and a core plate releasably secured to the master core plate, said core plate having a face, a first core insert secured to said core plate face; an intermediate cavity assembly including central manifold plates having opposing sides, one side facing the stationary core assembly the other side facing the moving core assembly, a cavity plate releasably secured to each of said opposing sides of the manifold plates, each cavity plate having a cavity insert secured thereto, one cavity plate and insert facing the core plate and insert of the stationary core assembly to form one cavity core insert pair, and the other cavity plate and insert facing the core plate and core insert of the moving core assembly to form another cavity core insert pair, said cavity assembly and moving core assembly movable by moving mold press means in such a manner that the cavity and core insert of each pair are separated by equal amounts on either side of the cavity assembly, and in a closed position, the cavity and core inserts of each pair are mated together simultaneously defining a cavity between the inserts of each pair, into which molten plastic is injected from a molten plastic source, said cavities forming the shape of a desired article, and in said closed position, the core plate and cavity plate of each pair are secured together to form respective mold modules, each mold module including a core plate, core inserts, cavity insert and cavity plate; once said cavity plates are released from securement to the manifold plates and all connections therebetween disengaged, the moving core

assembly and cavity assembly being moveable from the closed position to an open position where said cavity plates become separated from said manifold plates; and once said core plates are released from securement to said respective master core plates and all water, air, hydraulic and electric connections therebetween are disengaged, said mold modules being hoisted outwardly in a direction perpendicular to the direction of motion between said open and closed position, said modules being guided in said perpendicular direction by a set of roller guides secured to the master core plates and rollingly engaging said core plates, said roller guides following a guide path within a contoured slot defined in said core plate.

57. (New) The apparatus as recited in claim 56 wherein said contoured slot defined in the core plate is shaped to allow said module to move vertically and parallel to the master core plate for an initial distance thereby causing disengagement of quick disconnect couplings between plates, then spaced away from the master core plate for a further distance so as to accommodate the mold module from being rapidly hoisted out of the mold machine.

58. (New) The apparatus of claim 56 further including clamps positioned along the guide paths that clamp the core plates to the master core plates at the position of the guide path.

59. (New) The apparatus as recited in claim 56 wherein the position of said cavity plates and cavity inserts and said core plates and core inserts are interchanged, namely that said cavity plates and cavity inserts are positioned on said stationary and moving master core plates and said core plates and core inserts are positioned on the opposing sides of said manifold plates and said roller guides secured to the master core plates rollingly engage said cavity plates, said roller guides following a guide path within a contoured slot defined in said cavity plate.

60. (New) The apparatus as recited in claim 59 wherein said water, air, hydraulic and electric connections between master core and respective cavity plate are simultaneously disengageable and reengageable by quick disconnect couplings during module removal and reattachment respectively.

61. (New) The apparatus as recited in claim 59 wherein the water, air, hydraulic and electric connections between manifold plate and respective core plate are positioned parallel and in line of opening, thus allowing the simultaneous disengaging as the manifold plate and core plates separate during opening and simultaneous reengaging of said connections as said manifold plate and respective core plate return to the closed position.

62. (New) The apparatus as recited in claim 59 wherein the water, air, hydraulic and electric connections between manifold plate and respective cavity plate are positioned parallel and in line of opening, thus allowing the simultaneous disengaging as the manifold plate and cavity plate separate during opening and simultaneous reengaging of said connections as said manifold plate and respective cavity plate separate and return to the closed position.

63. (New) The apparatus as recited in claim 56 wherein said water, air, hydraulic and electric connections between master core and respective core plate are simultaneously disengageable and reengageable by quick disconnect couplings during module removal and reattachment respectively.

64. (New) The apparatus as recited in claim 56 wherein said water, air and hydraulic conduits are positioned within the upper periphery of said master core plates and manifold plates for connection to the service sources.

65. (New) The apparatus as recited in claim 56 further comprising an ejector plate operable to assist in ejection of the molded article from said core insert.